

CLAIMS

We claim:

1. A method for providing an identification service in a distributed system, comprising:

providing service elements, each service element including an adapter, a filter, and a logger;

receiving, by a first adapter, identification data from a reader;

providing the identification data from the first adapter to a first filter;

processing the identification data by the first filter;

providing the processed data from the first filter to a first logger;

notifying, by the first logger, a recipient of the processed data; and

monitoring the service elements to determine whether any service element fails.
2. The method of claim 1, wherein the establishing further comprises:

for each of the service elements,

determining whether an application corresponding to the service element is running in the distributed system, and

creating the application corresponding to the service element, if the application corresponding to the service element is not running in the distributed system.
3. The method of claim 1, wherein the communication is established using an event handling protocol and the identification data is transmitted as an event produced by the adapter.

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4. The method of claim 1, wherein the communication is established using an event handling protocol and the processed data is transmitted as an event produced by the filter.
5. The method of claim 1, wherein the communication is established using an event handling protocol and the user is notified by an event produced by the filter.
6. The method of claim 1, further comprising
re-establishing communication with a service element, when the service element fails.
7. The method of claim 1, wherein the service elements further include a queue, the method further comprising:
receiving, by the queue, the identification data; and
holding the identification data in queue for the filter.
8. The method of claim 1, wherein the processing further comprises:
extracting an identification code from the identification data, and wherein the
processed data comprises the identification code.
9. The method of claim 8, wherein the identification code is an electronic product code (EPC).
10. The method of claim 1, wherein the reader is a Radio Frequency Identification (RFID) tag reader and the identification data represents an RFID tag.

11. A method for providing an identification service in a distributed system, comprising:

dynamically creating an application corresponding to each of a plurality of service elements, the service elements including an adapter, a filter, and a logger;

receiving, by the adapter application, identification information corresponding to an item from a reader;

providing the identification information from the adapter application to the filter application;

processing the identification information by the filter application to create processed information including at least an identification code for the item;

providing the processed information from the filter application to the logger application;

providing the processed information to a recipient by the logger application; and

monitoring the application corresponding to each service to determine whether any application fails.
12. The method of claim 11, wherein the dynamically creating further includes:

downloading code for the application corresponding to each service element from a code server in the distributed system; and

registering the application corresponding to each service element with a registry service in the distributed system.
13. The method of claim 11, wherein the identification information further includes at least one of: a location of the item, a time the identification information was read

from the item, a date the identification information was read from the item, an identifier of the reader, and a location of the reader.

14. The method of claim 11, wherein the reader is a Radio Frequency Identification (RFID) tag reader.
15. The method of claim 11, wherein the identification code is an electronic product code (EPC).
16. The method of claim 11, further comprising:
formatting the processed data according to a format corresponding to the user.
17. A system for providing a distributed identification service comprising:
a reader service having service elements comprising:
an adapter that receives identification information from a reader,
a filter that processes the identification information, and
a logger that notifies a user of the processed information;
a registry service that establishes the reader service and its service elements;
and
a monitor service that determines whether the reader service or any of its service elements fails.
18. The system of claim 17, further comprising:
a code server containing code for use in establishing the reader service and its service elements.

19. The system of claim 17, wherein the reader is a Radio Frequency Identification (RFID) tag reader.
20. The system of claim 17, wherein the reader is configured to read the identification information from an item, and the identification information includes an identification code for the item.
21. The system of claim 20, wherein the identification code is an electronic product code (EPC).
22. The system of claim 17, wherein the user is an application.

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